

# SmartRooms

Thermal Comfort System

By Therma-Ray

Whether you're a contractor, architect, builder or homeowner, creating the perfect indoor environment has always been a challenge. ThermaRay, the world's #1 name in thermal comfort systems introduces you to the ultimate solution, SmartRooms. Please take the time to read this installation guide carefully before you begin. Remember, accurate measurements are the key to success for a proper installation.

## Standard Package Includes:

- 1) SmartRooms Controller
- 2) One sensor
- 3) 6 screws (2 painted white)
- 4) Box ring
- 5) 240/120 volt power module with built in Ground Fault Circuit Interrupter (GFCI)
- 6) Extended double gang electrical box

## NOT INCLUDED

- 4 - Wire Nuts

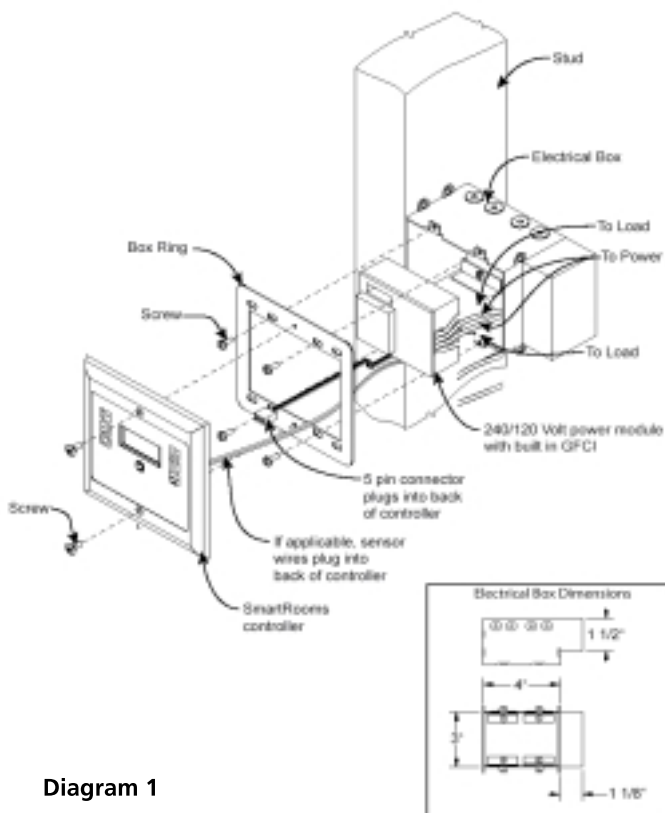


Diagram 1

## COMFORT CONTROLLER Floor Warming Line Voltage Installation Guide

### FOR USE ON:

- Heating only 240/120 Double Pole Applications with Power Module.
- Therma-Ray Floor Warming (Cable) System

### ELECTRIC RATING:

- 16A at 240/120 Vac
- 3840W at 240 Vac (Non-Inductive)
- 1920W at 120 Vac (Non-Inductive)

### TEMPERATURE DIFFERENTIAL

- Adjustable Range

**SENSORS:** By the time you are ready to connect your controller, the sensors should already have been installed. Review the installation instructions for your particular Therma-Ray Radiant Heating System for more information regarding the sensors.

## INSTALLATION

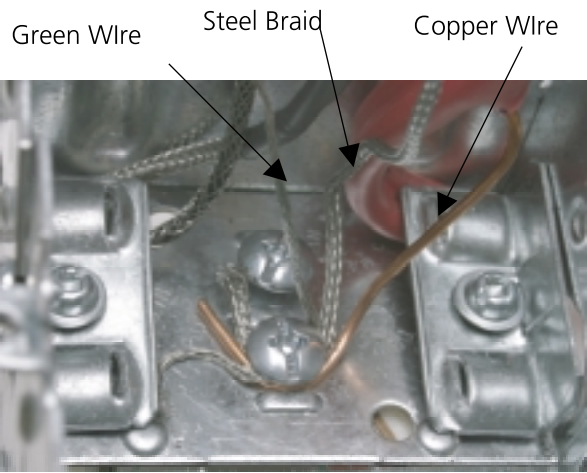
### WARNING

- This controller when used with the power module is a line voltage (240/120) control. Do not install it unless you are completely familiar with house wiring. If improperly handled, there can be a risk of electric shock hazard which may cause serious injury or death.
- The SmartRooms Comfort Controller is rated for normal full load current on a dual residential 20A circuit breaker or fuse block. Do not use on circuits protected by higher-rated over-current protection devices. Some sustained fault conditions can cause product failure.
- Do **NOT** connect to voltage different from device rating.

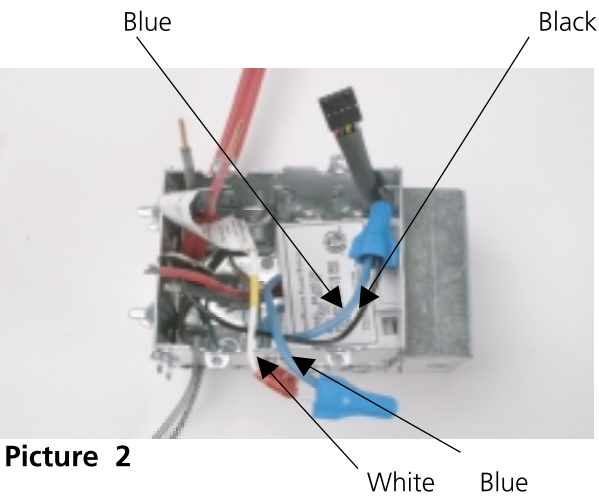
### CAUTION

- Disconnect power supply before making wire connections to prevent electrical shock or equipment damage.
- All wiring must comply with applicable codes and ordinances.
- Maximum load for this thermostat **MUST NOT EXCEED specified rating**; otherwise potential fire hazard exists.

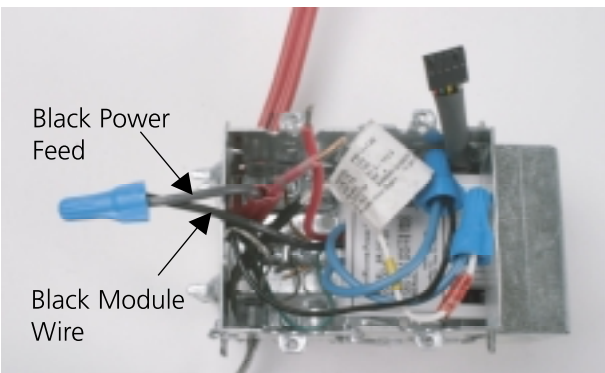
**NOTE:** The power module has its own built in Ground Fault Circuit Interrupter (GFCI). Therefore do not install a GFCI breaker on the circuit as this will cause the Controller to trip therefore preventing your floor warming system from operating.



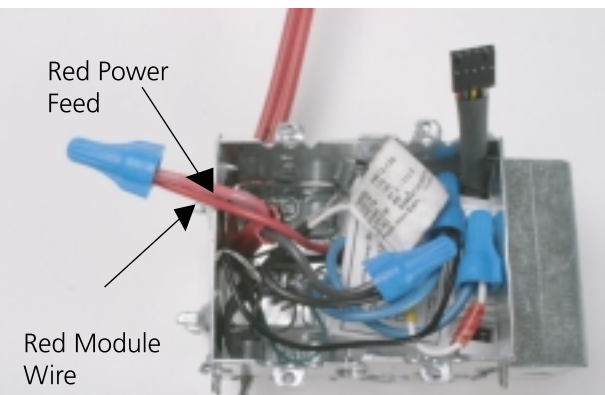
**Picture 1**



**Picture 2**



**Picture 3.**



**Picture 4**

**CAUTION: MAKE SURE ALL POWER IS OFF.**

The power module has 2 blue wires that will be connected to floor warming lead wires. The small green wire is a ground wire and will be connected to a screw in the electrical box. The red and black wires will be connected to the two power (line) voltage wires (usually red and black in colour).

**Check the voltage switch to ensure it is in the right position (120 volt or 240 volt) based on the voltage it is connected to. The controller is factory-set to 240V. To set the controller for 120V move the switch to the 120V position. Connecting the controller to a higher voltage will void the warranty.**

**Step 1** -Strip all the wires as needed to expose enough bare wire to make good connections.

**Step 2** - Take the green wire from the power module, the 2 steel braids from the floor warming lead wires and the copper wire from the power feed cable and connect them to one or more of the screws in the electrical box. It is not necessary to connect all of these wires to the same screw. As long as all the wires are connected to a screw in the box, the system will be grounded. (See picture 1)

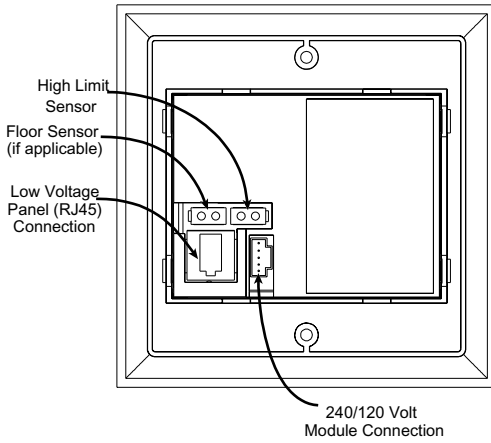
**Step 3** - Take one blue wire from the power module and connect it to the white lead wire from the floor warming system using a wire nut. Make sure the two (2) wires are securely connected. (Do not use electrical tape in replace of wire nuts). (See picture 2)

**Step 4** - Same as Step 2 except connect the other blue wire to the black floor warming lead wire. (See picture 2)

**Step 5** - Take the black wire from the power module and connect it to the black 240 or 120 volt power conductor. Use a wire nut to connect the two (2) wires. (See picture 3).

**Step 6** - Same as Step 4 except connect the red power module wire to the last remaining power conductor. (See picture 4).

All wires should now be connected. All the ground wires should be attached to a ground screw.



Back view of Face Plate

Diagram 2



**Step 7** - Slide the box ring into place and secure it to the electrical box using the 4 screws supplied. (See Diagram 1 on the front page).

**Step 8** - The power module simply snaps into the back of the controller face plate with the 5 pin black connector.

**Step 9** - Insert the sensor (s) in the back of the SmartRooms Controller. (See Diagram 2 as to the correct sensor connection).

**Step 10** - Attach the controller to the box ring using the 2 painted screws provided. The controller should be flush to the wall.

**Step 11** - Turn on the power at your service entrance panel.

**WARNING:**

To avoid risk or fire hazard, all connections to aluminum conductors must be made using approved CO/ALR solderless wire connectors.

**WARRANTY**

Therma-Ray Inc. One (1) Year Limited Warranty  
 Therma-Ray Inc. warrants the controller is free of defects in material and workmanship after proper installation for a one (1) year period from the date of installation. During this period, Therma-Ray Inc. will replace or repair the controller without charge if it has been used under normal conditions. This warranty does not cover delivery costs. The warranty does not apply if poorly installed or damaged after installation. Therma-Ray Inc. will not compensate for consequential damage, direct or indirect resulting from the failure of the controller. All other representations, warranties and conditions, whether oral or written, express or implied, statutory or otherwise are expressly excluded. The defective controller must be returned to the place of purchase or sent prepaid to Therma-Ray Inc.

**Therma-Ray Inc.**

670 Wilsey Road, Fredericton, N.B.  
 Canada E3B 7K4  
 Tel: 506-457-4600 .  
 Fax: 506-457-4699  
 E-mail: sales@thermaray.com  
 www.thermaray.com

Printed in Canada



August 2005